

OIPE

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/017,410**

DATE: 01/10/2002  
TIME: 15:52:34

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Output Set: N:\CRF3\01102002\J017410.raw

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3 <110> APPLICANT: Farnham, Peggy J  
4 Graveel, Carrie R  
6 <120> TITLE OF INVENTION: Polynucleotide Differentially Expressed in Liver Cancer  
8 <130> FILE REFERENCE: 960296.97401  
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/017,410  
C--> 11 <141> CURRENT FILING DATE: 2001-12-14  
13 <160> NUMBER OF SEQ ID NOS: 4  
15 <170> SOFTWARE: PatentIn Ver. 2.1  
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32 Asp His Leu Arg Ala Gly Ser Ser Glu Val Asp Trp Cys Glu Asp Asn  
33 10 15 20  
35 tac act atc gtg cct gcc att gcc gag ttc tac aac acg atc agc aac 151  
36 Tyr Thr Ile Val Pro Ala Ile Ala Glu Phe Tyr Asn Thr Ile Ser Asn  
37 25 30 35  
39 gtc ttg ttt ttc att tta cct ccc atc tgc atg tgc ttg ttc cgc cag 199  
40 Val Leu Phe Phe Ile Leu Pro Pro Ile Cys Met Cys Leu Phe Arg Gln  
41 40 45 50 55  
43 tac gca acg tgc ttc aac agc ggc atc tac tta ata tgg acg ctc cta 247  
44 Tyr Ala Thr Cys Phe Asn Ser Gly Ile Tyr Leu Ile Trp Thr Leu Leu  
45 60 65 70  
47 gtt gta gtg ggg att gga tct gtc tac ttc cat gca acg ctg agt ttc 295  
48 Val Val Val Gly Ile Gly Ser Val Tyr Phe His Ala Thr Leu Ser Phe  
49 75 80 85  
51 ctg ggt cag atg ctt gat gaa ctt gcc att ctg tgg gtt ctg atg tgt 343  
52 Leu Gly Gln Met Leu Asp Glu Leu Ala Ile Leu Trp Val Leu Met Cys  
53 90 95 100  
55 gct ttg gcc atg tgg ttt ccc agg agg tat tta cca aag atc ttt cgg 391  
56 Ala Leu Ala Met Trp Phe Pro Arg Arg Tyr Leu Pro Lys Ile Phe Arg  
57 105 110 115  
59 aat gac agg ggc agg ttc aag gca gtg gtg tgt gtc ctg tct gca att 439  
60 Asn Asp Arg Gly Arg Phe Lys Ala Val Val Cys Val Leu Ser Ala Ile  
61 120 125 130 135  
63 aca acg tgc ttg gcg ttt atc aag ccc gcc atc aac aat att tcc ctg 487  
64 Thr Thr Cys Leu Ala Phe Ile Lys Pro Ala Ile Asn Asn Ile Ser Leu  
65 140 145 150  
67 atg att ctg gga ctt cca tgc act gcg ctg ctt gtt gca gag ctg aag 535

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72	Arg Cys Asp Asn Val Arg Val Phe Lys Leu Gly Leu Phe Ser Gly Leu			
73	170	175	180	
75	tgg tgg act ctg gct ctc ttc tgc tgg atc agc gac caa gcc ttc tgt	631		
76	Trp Trp Thr Leu Ala Leu Phe Cys Trp Ile Ser Asp Gln Ala Phe Cys			
77	185	190	195	
79	gag ctg ctc tcc tcc ttt cac ttc ccc tac ctg cac tgt gtg tgg cat	679		
80	Glu Leu Leu Ser Ser Phe His Phe Pro Tyr Leu His Cys Val Trp His			
81	200	205	210	215
83	att ctc atc tgc ctt gct tcg tac ctg ggc tgt gtg tgc ttc gcc tac	727		
84	Ile Leu Ile Cys Leu Ala Ser Tyr Leu Gly Cys Val Cys Phe Ala Tyr			
85	220	225	230	
87	ttt gat gct gcc tca gag ata cct gag caa ggt cca gtc atc aga ttc	775		
88	Phe Asp Ala Ala Ser Glu Ile Pro Glu Gln Gly Pro Val Ile Arg Phe			
89	235	240	245	
91	tgg ccc agc gag aaa tgg gct ttt att ggt gtc oct tat gtg tcc ctt	823		
92	Trp Pro Ser Glu Lys Trp Ala Phe Ile Gly Val Pro Tyr Val Ser Leu			
93	250	255	260	
95	ctg tgt gcc cac aag aag tcg cca gtc aag atc acg tgatggcaag	869		
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103	tgtatctaa ctggaccact gtgcctgacc tccctaggtt aagtagaggg ctcaaggaca	1049		
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133	gatcccagg aggaaaggccc agactctgac atgaatgtct ctcacctgca tcctactgtc	1949		
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143	cttaaaagagt tttaaatga atagacttca ttctgtttt gtggctttgg agttttaaaa	2249		
145	gtaaacttgc gggcttattc ttgtttatag tcacaaatat ttatagaaca tgaaggtgt	2309		
147	aaataagtg tcttttatta aattcatagc atttaccaac tctcccaagg agcaaacaca	2369		
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 155 agagggcaa atcaaactag cttgtttct ggttcatctt accaggctcg ggagctgcc 2609  
 157 ttatataattc tacataagga cttattatac ataagtctgt ataaatgtcc tgaagatgac 2669  
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 163 cagccctggg gcatctgacg ccctttctg acttctaagg gcatttggg cacacgtaca 2849  
 165 tacaggcagg caaaacattt atacatgtaa cgtaataaat gcataagttt gtgagacggc 2909  
 167 tgaagggaaag gagttttaga tgcaagggtt agtctgaccc gagtgccctt ctttagccgc 2969  
 169 gatgggttcc tcaaagtccg ggaagaacca tttttttt atcaggaaaa ggacttattc 3029  
 171 ccttagggctt ctgtgacat cccttaggaac agagataaaa tacggatgaa tgtgaatgaa 3089  
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 181 attttacagt tttgaaccat tattggttt taggagaatt cttctctctc tagtgccctg 3389  
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 224 Phe Tyr Asn Thr Ile Ser Asn Val Leu Phe Phe Ile Leu Pro Pro Ile  
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 227 Cys Met Cys Leu Phe Arg Gln Tyr Ala Thr Cys Phe Asn Ser Gly Ile  
 228 50 55 60  
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 231 65 70 75 80  
 233 Phe His Ala Thr Leu Ser Phe Leu Gly Gln Met Leu Asp Glu Leu Ala  
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 237 100 105 110

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245 Ala Ile Asn Asn Ile Ser Leu Met Ile Leu Gly Leu Pro Cys Thr Ala  
246 145 150 155 160  
248 Leu Leu Val Ala Glu Leu Lys Arg Cys Asp Asn Val Arg Val Phe Lys  
249 165 170 175  
251 Leu Gly Leu Phe Ser Gly Leu Trp Trp Thr Leu Ala Leu Phe Cys Trp  
252 180 185 190  
254 Ile Ser Asp Gln Ala Phe Cys Glu Leu Leu Ser Ser Phe His Phe Pro  
255 195 200 205  
257 Tyr Leu His Cys Val Trp His Ile Leu Ile Cys Leu Ala Ser Tyr Leu  
258 210 215 220  
260 Gly Cys Val Cys Phe Ala Tyr Phe Asp Ala Ala Ser Glu Ile Pro Glu  
261 225 230 235 240  
263 Gln Gly Pro Val Ile Arg Phe Trp Pro Ser Glu Lys Trp Ala Phe Ile  
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288 gtg gac tgg tgc gag gac aac tac acc atc gtg cct gct atc gcc gag 96  
289 Val Asp Trp Cys Glu Asp Asn Tyr Thr Ile Val Pro Ala Ile Ala Glu  
290 20 25 30  
292 ttc tac aac acg atc agc aat gtc tta ttt ttc att tta ccg ccc atc 144  
293 Phe Tyr Asn Thr Ile Ser Asn Val Leu Phe Phe Ile Leu Pro Pro Ile  
294 35 40 45  
296 tgc atg tgc ttg ttt gat gag tat gca aca tgc ttg aac agt gac atc 192  
297 Cys Met Cys Leu Phe Asp Glu Tyr Ala Thr Cys Leu Asn Ser Asp Ile  
298 50 55 60  
300 tac tta atc tgg act ctt ttg gtt gta gtg gga att gga tcc gtc tac 240  
301 Tyr Leu Ile Trp Thr Leu Leu Val Val Gly Ile Gly Ser Val Tyr  
302 65 70 75 80  
304 ttc cat ttt acc ctt agt ttc ttg ggt cag atg ctt gat gaa ctt gca 288  
305 Phe His Phe Thr Leu Ser Phe Leu Gly Gln Met Leu Asp Glu Leu Ala  
306 85 90 95  
308 gtc ctt tgg gtt ctg atg tgt gct ttg gcc atg tgg ttc ccc aga agg 336

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314					115					120					125	
316	gtc	agt	gtc	ctg	tct	gct	acg	acg	tgc	ctg	gca	ttt	gtc	aag	cct	384
317	Val	Ser	Val	Leu	Ser	Ala	Val	Thr	Thr	Cys	Leu	Ala	Phe	Val	Lys	Pro
318					130				135					140		
320	gcc	atc	aac	aac	atc	tct	ctg	atg	acc	ctg	gga	gtt	cct	tgc	act	480
321	Ala	Ile	Asn	Asn	Ile	Ser	Leu	Met	Thr	Leu	Gly	Val	Pro	Cys	Thr	Ala
322	145					150				155					160	
324	ctg	ctc	atc	gca	gag	cta	aag	agg	tgt	gac	aac	atg	cgt	gtg	ttt	528
325	Leu	Leu	Ile	Ala	Glu	Leu	Lys	Arg	Cys	Asp	Asn	Met	Arg	Val	Phe	Lys
326					165				170					175		
328	ctg	ggc	ctc	tcc	tcg	ggc	ctc	tgg	tgg	acc	ctg	gcc	ctg	tcc	tgc	576
329	Leu	Gly	Leu	Phe	Ser	Gly	Leu	Trp	Trp	Thr	Leu	Ala	Leu	Phe	Cys	Trp
330					180				185					190		
332	atc	agt	gac	cga	gct	tcc	tgc	gag	ctg	ctg	tca	tcc	tcc	aat	ttc	624
333	Ile	Ser	Asp	Arg	Ala	Phe	Cys	Glu	Leu	Leu	Ser	Ser	Phe	Asn	Phe	Pro
334					195				200					205		
336	tac	ctg	cac	tgc	atg	tgg	cac	atc	ctc	atc	tgc	ctt	gct	gcc	tac	672
337	Tyr	Leu	His	Cys	Met	Trp	His	Ile	Leu	Ile	Cys	Leu	Ala	Ala	Tyr	Leu
338					210				215					220		
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341	Gly	Cys	Val	Cys	Phe	Ala	Tyr	Phe	Asp	Ala	Ala	Ser	Glu	Ile	Pro	Glu
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344	caa	ggc	cct	gtc	atc	aag	ttc	tgg	ccc	aat	gag	aaa	tgg	gcc	ttc	768
345	Gln	Gly	Pro	Val	Ile	Lys	Phe	Trp	Pro	Asn	Glu	Lys	Trp	Ala	Phe	Ile
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349	Gly	Val	Pro	Tyr	Val	Ser	Leu	Leu	Cys	Ala	Asn	Lys	Lys	Ser	Ser	Val
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367					20				25					30		
369	Phe	Tyr	Asn	Thr	Ile	Ser	Asn	Val	Leu	Phe	Phe	Ile	Leu	Pro	Pro	Ile
370					35				40					45		
372	Cys	Met	Cys	Leu	Phe	Asp	Glu	Tyr	Ala	Thr	Cys	Leu	Asn	Ser	Asp	Ile
373					50				55					60		
375	Tyr	Leu	Ile	Trp	Thr	Leu	Leu	Val	Val	Val	Gly	Ile	Gly	Ser	Val	Tyr

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L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date